

What is claimed is:

1. A printhead assembly for a printer which prints onto a moving web that follows a path, comprising:

a full width printhead located across the path;

5 the printhead comprising a color printhead which is at least as wide as the web;

the printhead being supplied with a number of different inks which are remote from the printhead and which supply the printhead through tubes.

2. The printhead assembly of claim 1, further comprising:

10 a rail which is located across the path and along which the printhead slides into and out of a printing position.

3. The printhead assembly of claim 2, wherein:

the printhead is secured to the rail by fasteners which allow the printhead to be removed when the fasteners are disengaged.

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4. The printhead assembly of claim 1, wherein:

the inks are contained in individual reservoirs and a supply tube connects each reservoir to the printhead.

5. The printhead assembly of claim 1, further comprising:

20 an air supply which supplies a stream of air, through a supply tube, to a location near the printhead from where the stream impinges onto the web to prevent it from adhering to the printhead.

6. The printhead assembly of claim 1, wherein:

the printhead assembly further comprises a capping device having a capper motor for sealing the printhead

25 when not in use in order to prevent contamination from entering the printheads.

7. The printhead assembly of claim 6, wherein:

the capping device further comprises a blotter, which moves into and out of position and which is used for absorbing ink fired from the printhead.

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8. The printhead assembly of claim 1, further comprising:

one or more rail microadjusters for accurately adjusting a gap between the printhead and the media onto which it is printing.

5 9. The printhead assembly of claim 4, further comprising:

a coupling in each ink supply tube which can be disconnected so that the printhead can be withdrawn.

10. The printhead assembly of claim 5, further comprising:

10 a coupling in the air supply tube which can be disconnected so that the printhead can be withdrawn.

11. The printhead assembly of claim 1, further comprising:

a pre-heater located adjacent to the path and before the printhead.

15 12. The printhead assembly of claim 1, further comprising:

a dryer in the same path as the printer the dryer adapted to dry the ink deposited by the printer.

13. The printhead assembly of claim 12, wherein:

the dryer has a compartment located beneath an opening;

20 the opening being essentially in the path;

there being a source of heated air located above the opening, the source of heated air adapted to blow heated air into the opening.

14. The printhead assembly of claim 13, wherein:

25 the opening is coverable by a door; and

the door covers the entire opening and acts to support the web when the door is closed.

15. The printhead assembly of claim 14, wherein:

the door pivots along an axis transverse to the path to reveal the opening.

16. The printhead assembly of claim 15, wherein:
the door is operated by a motor that operates a spool;
the spool winding and releasing a cord which operates the door.
- 5 17. The printhead assembly of claim 13, wherein:
the source of heated air comprises a blower which feeds a stream of air into a plenum.
18. The printhead assembly of claim 17, wherein:
a temperature sensor is located in the plenum.
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19. The printhead assembly of claim 13, wherein:
the compartment is adapted to receive the web in a catenary path.
20. The printhead assembly of claim 13, wherein:
- 15 the compartment has an air vent which supplies a recirculation duct that leads to a motor intake.
21. A printhead assembly as claimed in claim 1 wherein the web is printed by the printhead at a rate exceeding 0.02 square meters per second (775 square feet per hour).
- 20 22. A printhead assembly as claimed in claim 1 wherein the web is printed by the printhead at a rate exceeding 0.1 square meters per second (3875 square feet per hour).
23. A printhead assembly as claimed in claim 1 wherein the web is printed by the printhead at a rate exceeding 0.2 square meters per second (7750 square feet per hour).
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24. A printhead assembly as claimed in claim 1 wherein the printhead has more than 7680 nozzles.
25. A printhead assembly as claimed in claim 1 wherein the printhead has more than 20,000 nozzles.
- 30 26. A printhead assembly as claimed in claim 1 wherein the printhead has more than 100,000 nozzles.

27. A printhead assembly as claimed in claim 1 wherein the printhead has more than 250,000 nozzles.
 28. A printhead assembly as claimed in claim 1 wherein the printhead prints ink drops with a volume of less
5 than 5 picoliters.
 29. A printhead assembly as claimed in claim 1 wherein the printhead prints ink drops with a volume of less
than 3 picoliters.
- 10 30. A printhead assembly as claimed in claim 1 wherein the printhead prints ink drops with a volume of less
than 1.5 picoliters.
31. A printhead assembly as claimed in claim 1 wherein the printer is a self contained printer for producing
rolls of wallpaper, the printer comprising:
15 a cabinet in which is located a media path which extends from a media cartridge loading area to a winding
area;
a full width digital color printhead located in the media path;
a processor which accepts operator inputs which are used to configure the printer for producing a particular
roll; and
20 the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.
32. A printhead assembly as claimed in claim 1 wherein the printer is adapted for use with a media cartridge,
the media cartridge comprising:
a case in which a roll of blank media may be deployed;
25 the case having two halves, hinged together, an area between the two halves, when closed, defining a media
supply slot; and
the case having internally and adjacent to the slot, a pair of rollers, at least one of the rollers being a driven
roller which is supported at each end, by the case, for rotation by an external motor.

33. A printhead assembly as claimed in claim 1 wherein the printer is adapted for producing rolls of wallpaper for being carried in a consumer tote, the tote comprising:
a disposable exterior in which is formed a main access flap and a pair of core access openings; and
the tote having an interior in which is located a disposable core which is aligned with the access openings.

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34. A printhead assembly as claimed in claim 1 wherein the printer has a transverse cutter, the cutter comprising:

a chassis having end plates;

the end plates being separated to allow a web of media to pass between them;

10 the end plates supporting between them a cutting blade; and

the blade supported at each end to perform a cutting motion which begins on one side of the web and finishes on an opposite side of the web.

35. A printhead assembly as claimed in claim 1 wherein the printer has a slitting mechanism, the slitting 15 mechanism comprising:

a chassis having end plates;

the end plates being separated by a transverse portion of the chassis to allow a web of media to pass between them;

one or more rotating slitting shafts extending between the end plates, each shaft having one or more slitters

20 arranged along its length, each slitter having a cutting edge; and

the slitting mechanism selectively engageable to either enter or not enter a path followed by the web according to an input provided by an operator of the printer.

36. A printhead assembly as claimed in claim 1 wherein the printer has a dryer, the dryer comprising:

25 a compartment with a top opening for receiving a media web fed from the printer;

a source of heated air located above the top opening for blowing heated air into the opening to dry printing on the media web.

37. A printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper,

30 the printer comprising:

- a cabinet in which is located a media path which extends from a media loading area to a winding area;
a printhead located in the media path;
a processor which accepts operator inputs from one or more input devices which are used to configure the printer for producing a particular roll; and
5 the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer wherein,
the length and design of the roll are determined by the operator inputs.

38. A printhead assembly as claimed in claim 1 for use in a method of printing wallpaper onto a web of
10 media, the method comprising the steps of:
utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a winding area, there being a printhead located in the media path, a processor which accepts operator inputs from one or more input devices;
using one or more input devices which communicate with the processor to capture data from an operator
15 regarding a specification for an operator's requirements;
using the processor to operatively control the printer according to the data; and
printing a single roll of wallpaper, on demand, according to a selected pattern.

39. A printhead assembly as claimed in claim 1 for use in a method of operating a wallpaper printing
20 business, the method comprising the steps of:
utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a printhead and from the printhead to a dispensing slot;
using one or more printer input devices which communicate with a processor to capture data regarding one or
more customer's requirements;
25 the data comprising at least a customer selected pattern;
printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern; and
charging a customer for the roll.

40. A printhead assembly as claimed in claim 1 for use in a method of operating a wallpaper printing
30 franchise, the method comprising the steps of:

providing to franchisees, an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a printhead and from the printhead to a dispensing slot; the printer having one or more printer input devices which communicate with a processor to capture data regarding one or more customer requirements, the data comprising at least a customer selected pattern;

5 providing the franchisee with a collection of patterns in a digital storage medium that can be read by the printer; enabling the franchisee to print a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern; and obtaining or attempting to obtain a fee from the franchisee.

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41. A printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper, the printer comprising:

a frame in which is located a media path which extends from a media loading area to a winding area; a printhead located across the media path;

15 one or more input devices for capturing operator instructions; a processor which accepts operator inputs which are used to configure the printer for producing a particular roll; and the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.

20 42. A printhead assembly as claimed in claim 1 for use in a method of printing wallpaper onto a web of media, the method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path, there being a full width printhead located across the media path, there being a processor which accepts operator inputs from one or more input devices and which controls the printer;

25 using one or more input devices which communicate with the processor to capture data from an operator regarding a specification; running the printer according to the data; printing a single roll of wallpaper, on demand, according to a selected pattern and configuration; changing the pattern according to a new datum from an operator; and

30 then printing a new roll onto the same web.

43. A printhead assembly as claimed in claim 1 for use in a method of drying a moving web of media in a printer such as a wallpaper printer, the method comprising the steps of:

loading the web in a path that traverses a compartment in a dryer within the printer, the compartment having

5 an opening across the top;

allowing the moving web to descend into the compartment, as required; and

blowing heated air from above the opening.

44. A printhead assembly as claimed in claim 1 for use in a method of supplying a media web to a wallpaper

10 printer, the method comprising the steps of:

opening a reusable case;

placing into the case a core onto which has been located a supply roll of blank wallpaper media;

supporting the core for rotation within the case;

leading a free edge of the roll between a pair of rollers and past an edge of the open case; then

15 with the rollers located within the case and on either side of the web, closing the case and loading it into a printer.

45. A printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper, the printer comprising:

20 a housing in which is located a media path which extends from a blank media intake to a wallpaper exit slot;

a multi-color roll width removable printhead located in the housing and across the media path;

the printhead being supplied by separate ink reservoirs, the reservoirs connected to the printhead by a ink supply harness, there being a disconnect coupling between the reservoirs and the printhead;

one or more input devices for capturing operator instructions;

25 a processor which accepts operator inputs which are used to configure the printer for producing a particular roll.

46. A printhead assembly as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper that can be carried in a consumer tote, the tote comprising:

30 a disposable exterior in which is formed a main access flap and a pair of core access openings;

the tote having an interior in which is located a disposable core which is aligned with the access openings; both openings exposing a moulded coupling, one coupling attached to each end of the core, at least one of the couplings being a driven coupling and adapted to engage a driving spindle that rotates the core.

- 5 47. A printhead assembly as claimed in claim 1 wherein the printhead assembly is removable and adapted to print onto a moving web, the assembly further comprising:
- a full width stationary printhead located on a rail along which it slides for service and removal;
- a number of replaceable ink reservoirs which supply the printhead with different inks;
- the printhead comprising a color printhead which is at least as wide as the web; and
- 10 the printhead being supplied with the different inks through tubes which can be disconnected so the printhead may be removed.
48. A printhead assembly as claimed in claim 1 wherein the printer is self threading and adapted to produce rolls of wallpaper, comprising:
- 15 a media loading area adapted to support a media cartridge in a position so that a media supply slot of the cartridge is closely adjacent to a pilot guide;
- a cabinet housing a media path which extends from the pilot guide to a printed media dispensing slot;
- a printhead located across the media path;
- a processor which accepts operator inputs which are used to configure the printer for producing a particular
- 20 roll;
- a motor within the cabinet for advancing a media web out of the media cartridge; and
- one or more other motors adapted to urge the media along the path and out of the slot.
49. A printhead assembly as claimed in claim 1 adapted for use in a method of producing wallpaper on-
- 25 demand, the method comprising the steps of:
- utilizing an on-demand printer comprising a cabinet in which is located a media path which passes a printhead on the way to a dispensing slot;
- selecting a pattern and a configuration;
- using one or more printer input devices which communicate with a processor to input the pattern and the
- 30 configuration; and

printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern and configuration.